

JAY 17 2004

**Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.**

PTO/SB/08A (08-03)

Approved for use through 07/31/2006, OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Shee

1

1

**Complete if Known**

Application Number	10/663,551
Filing Date	September 16, 2003
First Named Inventor	William J. Borland
Art Unit	2831
Examiner Name	

Attorney Docket Number EL0496 US NA

## **U. S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> ( <i>if known</i> )			
BB		EP 0 409 668 A2	01-23-1991	Omron Corp.	
		EP 1 093 327 A2	04-18-2001	DuPont	
W		EP 1 265 466 A2	12-11-2002	Dai Nippon Printing Co.	

**Examiner  
Signature**

Jeremy Norris

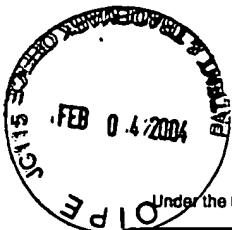
Date  
Considered

J-17-05

**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. **<sup>1</sup>** Applicant's unique citation designation number (optional). **<sup>2</sup>** See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. **<sup>3</sup>** Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). **<sup>4</sup>** For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. **<sup>5</sup>** Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. **<sup>6</sup>** Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08b (08-03)

Approved for use through 06/30/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

1

of

1

Attorney Docket Number

*Complete If Known*

Application Number

10/663,551

Filing Date

September 16, 2003

First Named Inventor

William J. Borland

Art Unit

2831

Examiner Name

--	--	--	--	--

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
KJN		DR. KIM FJELDSTED AND STACEY L. CHASE, EMBEDDED PASSIVES: LASER TRIMMED RESISTORS, CIRCUITREE, Volume 70, March 2002.	<input type="checkbox"/>
			<input type="checkbox"/>

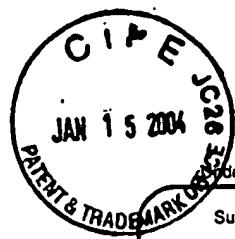
Examiner Signature	Jenay Morris	Date Considered	8-12-05
--------------------	--------------	-----------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



**Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.**

Substitute for form 1449/PTO

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Shee

1

9

3

**Complete if Known**

Application Number	10/663,551
Filing Date	September 16, 2003
First Named Inventor	William J. Borland
Art Unit	2831
Examiner	

U.S. PATENT DOCUMENTS

## **FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Country Code <sup>2</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear T <sup>6</sup>	
JP		JP 2003-92460	05-31-2002	
		JP 2-153589	06-13-1990	Ibiden KK
✓		JP 2001-168491	12-09-1999	

**Examiner  
Signature**

Jeremy Norris

Date Considered

3-1203

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>2</sup>Applicant's unique citation designation number (optional). <sup>3</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>4</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>7</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08b (08-03)

Approved for use through 06/30/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				<b>Complete If Known</b>	
				<i>Application Number</i>	10/663,551
				<i>Filing Date</i>	September 16, 2003
				<i>First Named Inventor</i>	William J. Borland
				<i>Art Unit</i>	2831
				<i>Examiner Name</i>	
Sheet	2	of	3	<i>Attorney Docket Number</i>	EL0496 US NA

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				T <sup>2</sup>
<i>JW</i>		JOHN FELTEN AND SAUL FERGUSON, Embedded Ceramic Resistors and Capacitors for PWB, IP Printed Circuit Expo, San Diego, CA, April 2000.				<input type="checkbox"/>
		JOHN J. FELTEN AND SAUL FERGUSON, Ceramic Resistors and Capacitors Embedded in PWB, IPC, San Diego, April 5, 2000.				<input type="checkbox"/>
		JOHN J. FELTEN AND SAUL FERGUSON, Ceramic Resistors and Capacitors Embedded in PWB, IMAPS, Denver, April 29, 2000.				<input type="checkbox"/>
		JOHN J. FELTEN AND WILLIAM J. BORLAND, Embedded Ceramic Passives in PWB: Process Development, IPC Printed Circuit Expo, Anaheim, CA, April 2001.				<input type="checkbox"/>
		JOHN J. FELTEN AND WILLIAM J. BORLAND, Ceramic Resistors and Capacitors Embedded in PWB's, IPC Expo, April 3, 2001..				<input type="checkbox"/>
		WILLIAM BORLAND, Designing for Embedded Passives, Printed Circuit Design, August 2001.				<input type="checkbox"/>

Examiner Signature	<i>Jeremy Morris</i>	Date Considered	<i>3-17-04</i>
--------------------	----------------------	-----------------	----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/08b (08-03)

Approved for use through 06/30/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				<b>Complete If Known</b>	
				<i>Application Number</i>	10/663,551
				<i>Filing Date</i>	September 16, 2003
				<i>First Named Inventor</i>	William J. Borland
				<i>Art Unit</i>	2831
				<i>Examiner Name</i>	
Sheet	3	of	3	Attorney Docket Number	EL0496 US NA

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
<i>JBN</i>		WILLIAM BORLAND, JOHN J. FELTEN, Thick Film Ceramic Capacitors and Resistors inside Printed Circuit Boards, 34th International Symposium on Microelectronics (IMAPS), Oct. 9-11th, 2001, Baltimore, MD.			<input type="checkbox"/>
		JOHN FELTEN, RICHARD SNOGREN, JIMING ZHOU, Embedded Ceramic Resistors and Capacitors in PWB: Process and Performance, Fall IPC Meeting, October 11, 2001, Orlando, FL.			<input type="checkbox"/>
		WILLIAM J. BORLAND AND SAUL FERGUSON, Embedded Passive Components in Printed Wiring Boards, a Technology Review, To be published in CircuiTree Magazine, 2001.			<input type="checkbox"/>
		JIMING ZHOU, JOHN D. MYERS AND JOHN J. FELTEN, Embedded Passives Technology for PCBs: Materials, Design, and Process, IMAPS 2002 Conference, Denver, CO, Sept. 4-6, 2002.			<input type="checkbox"/>
		JOHN J. FELTEN, Electronic Circuits World Convention, Paper number IPC31, Advanced Embedded Passives Technologies - Putting Ceramic Components into Organic PWBS.			<input type="checkbox"/>
		WILLIAM BORLAND, JOHN J. FELTEN, SAUL FERGUSON, ALTON B. JONES AND ANGELA A. LAWRENCE, Embedded Singulated Ceramic Passives in Printed Wiring Boards, IMAPS Advanced Technology Workshop on Passive Integration, Ogunquit, ME, June 19-21, 2002.			<input type="checkbox"/>

Examiner Signature	<i>Jeremy Morris</i>	Date Considered	3-17-09
--------------------	----------------------	-----------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.